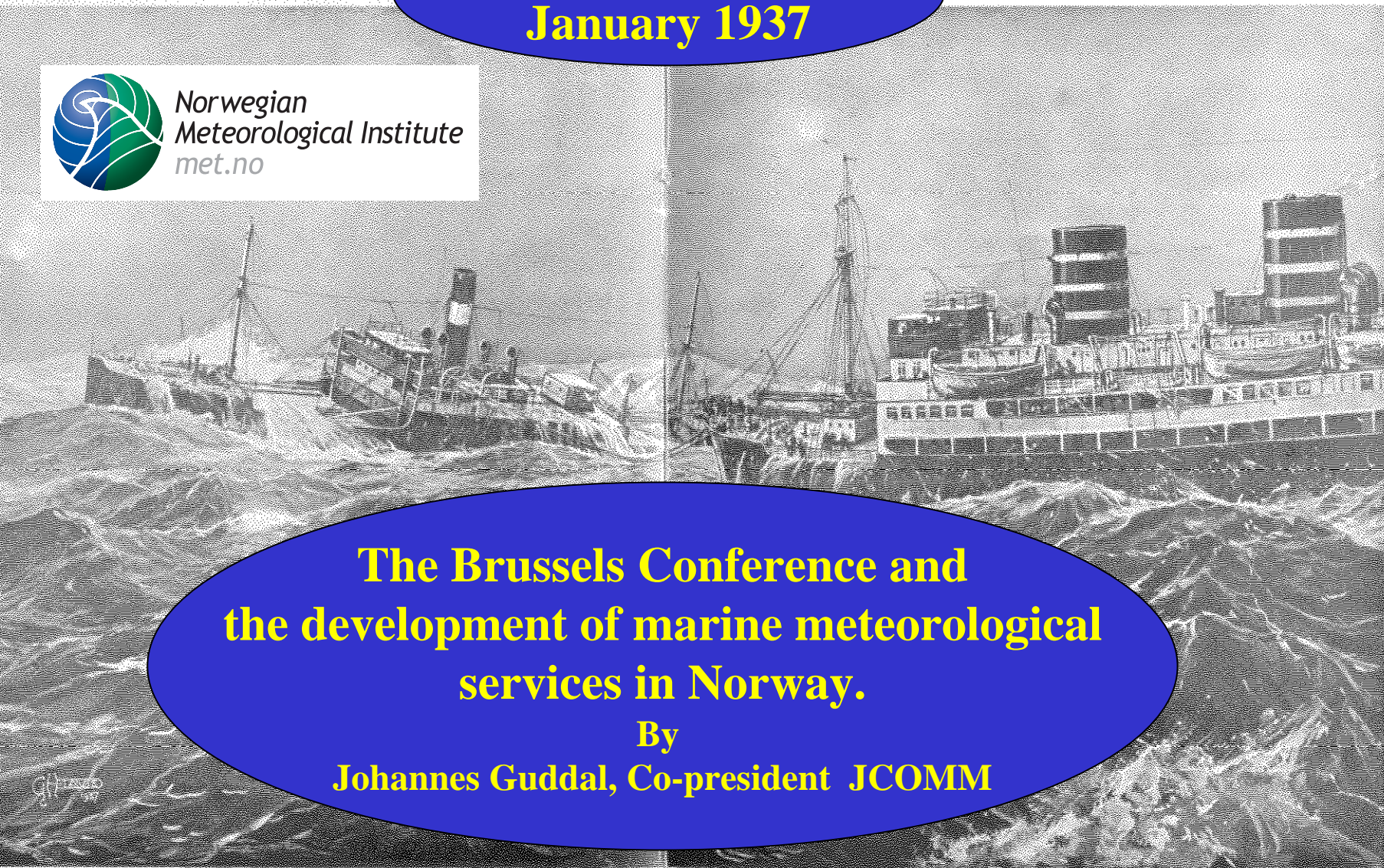


HEROIC SEAMANSHIP TRIUMPHS

THE "VENUS" AND THE "TRYM."

The stormy January 1937



The Brussels Conference and the development of marine meteorological services in Norway.

By Johannes Guddal, Co-president JCOMM

VIEW OF THE DOOMED "TRYM" BEING TAKEN OFF BY MEANS OF A BREECHES BUOY IN THE GALE IN THE NORTH SEA. A DRAWING SHOWING THE FEAT MADE POSSIBLE BY THE SKILL OF THE CAPTAIN OF THE "VENUS" IN KEEPING WITHIN 100FT. OF THE "TRYM" ALTHOUGH THERE WAS CONSTANT DANGER OF THE SEAS FLINGING THE TWO SHIPS TOGETHER.

...ues in the North Sea caused many disasters and led to heroic and the finest of these was the saving of the crew of the "Trym" (3400 tons). For nearly thirty-six hours the "Venus" was in rescue attempts in one of the worst gales ever known in the In answer to the "Trym's" S.O.S., the "Venus" came up with vessel about two in the morning on Tuesday, January 19. Later attempted to launch a boat and drift it down to the "Trym."

but this boat was damaged. At six in the morning on the Wednesday the "Venus" at last succeeded in getting a manned boat away and this was rowed across the dark, raging sea to the disabled vessel. The boat worked round the bows of the "Trym," but, owing to the water coming over the wallowing ship, it proved impossible to get alongside. At this moment, one of the crew of the "Trym," named Opsahl, fastened a line round his waist and jumped overboard, and, being a powerful swimmer, struggled through thirty yards of icy water, reached the boat, and was taken on board. Connection by

line was thus made between the waterlogged wreck and the boat. By this means, five men were rescued and brought back to the "Venus." The lifeboat, however, could not be got in again, and was abandoned. With the coming of daylight, the "Venus" worked her way round the wreck and came up with her bows pointing at the "Trym's" port side. Now followed a truly magnificent piece of seamanship on the part of Captain Dreyer, of the mail-boat. He carefully manoeuvred his ship nearer and nearer to the "Trym," which was now badly down by the stern, with her fires out and

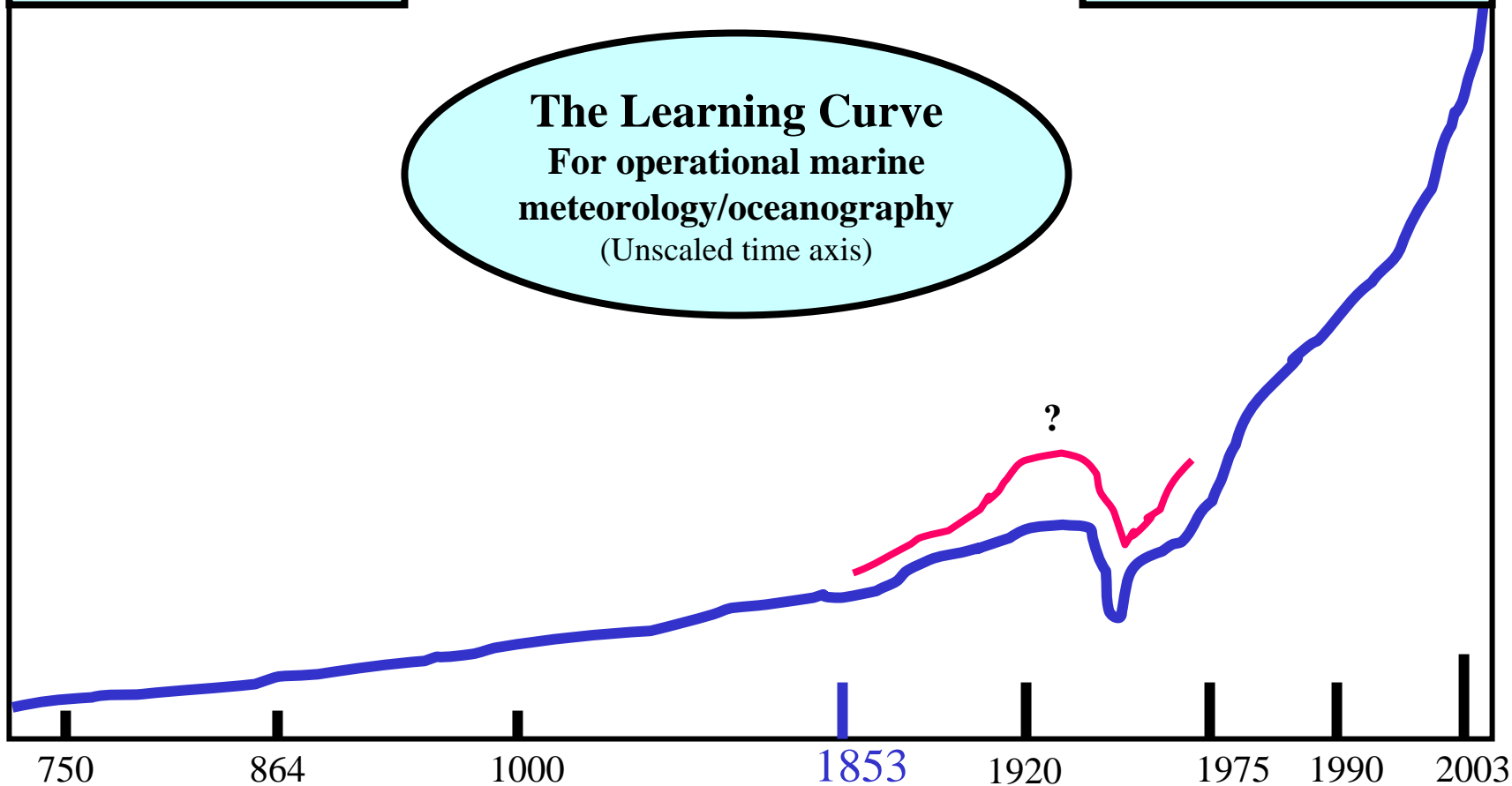
her decks continuously washed by the seas. At last a line could be fired on board her. Connection being established, a breeches-buoy was rigged up and one by one the thirteen that remained on board the "Trym" were hauled on to the "Venus." During this hazardous work, at times the two ships were only 50 to 100 feet apart. The south-easterly gale drove the two vessels over fifty miles to the north-west during the rescue. Captain Dreyer has been made a Commander of the Order of St. Olaf by King Haakon for this magnificent display of seamanship.

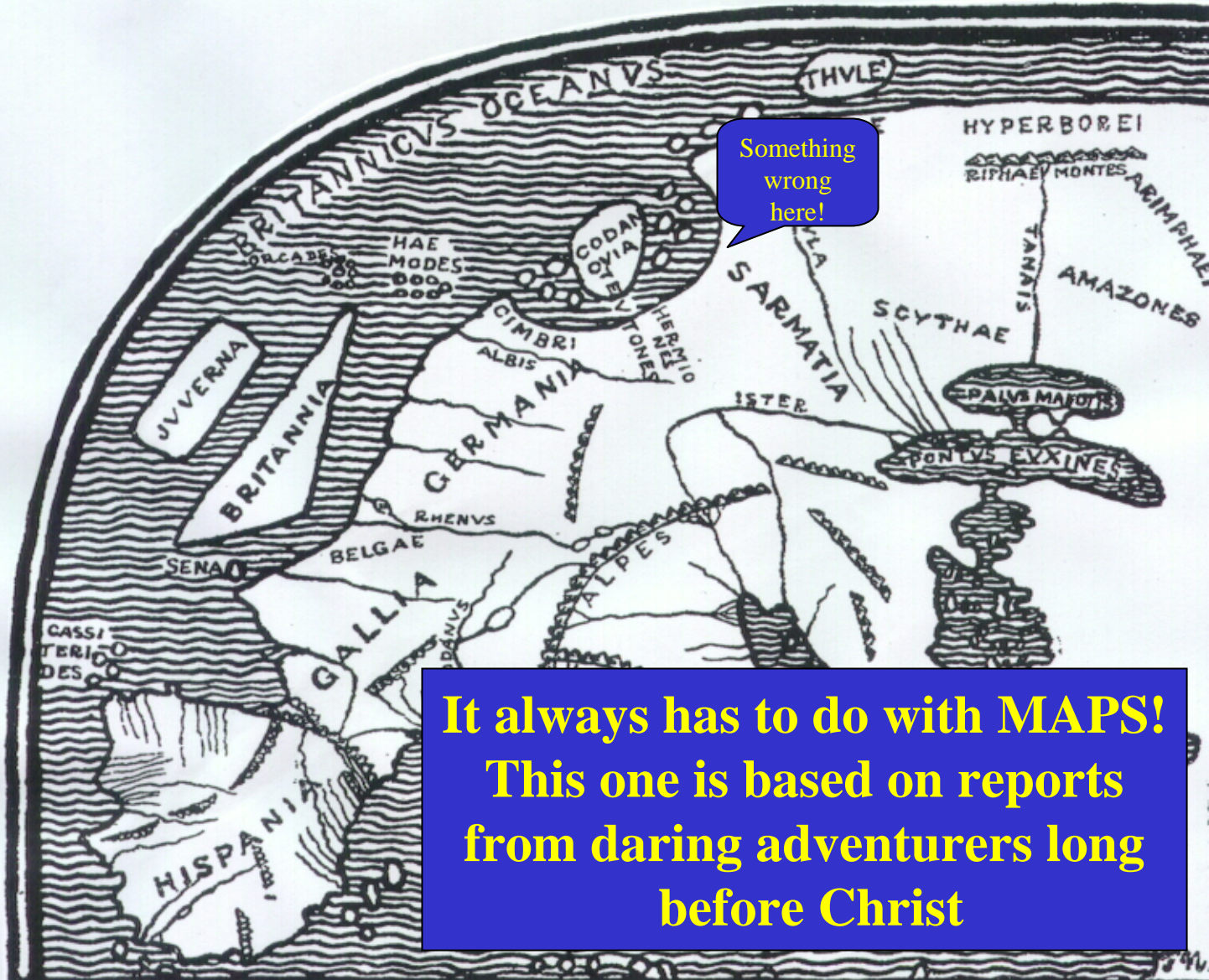
Ocean experience was also gained in older times:

Mapping started from scratch, sea conditions were self experienced

Present day development involves modern tools within observations, modeling and end user adaptation/integration.

The Learning Curve
For operational marine meteorology/oceanography
(Unscaled time axis)

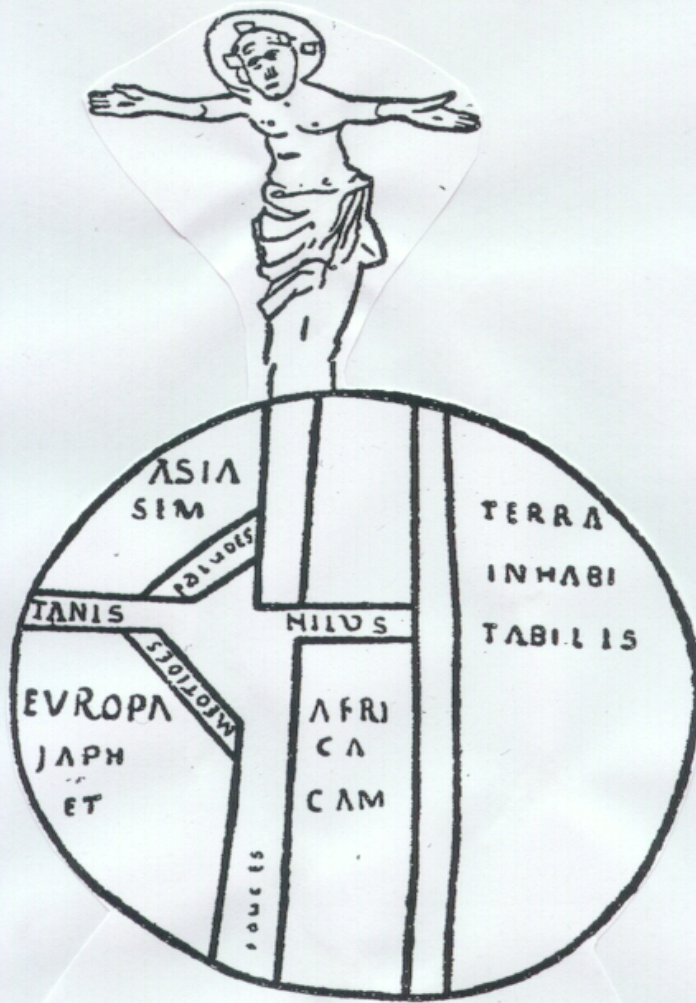




Something wrong here!

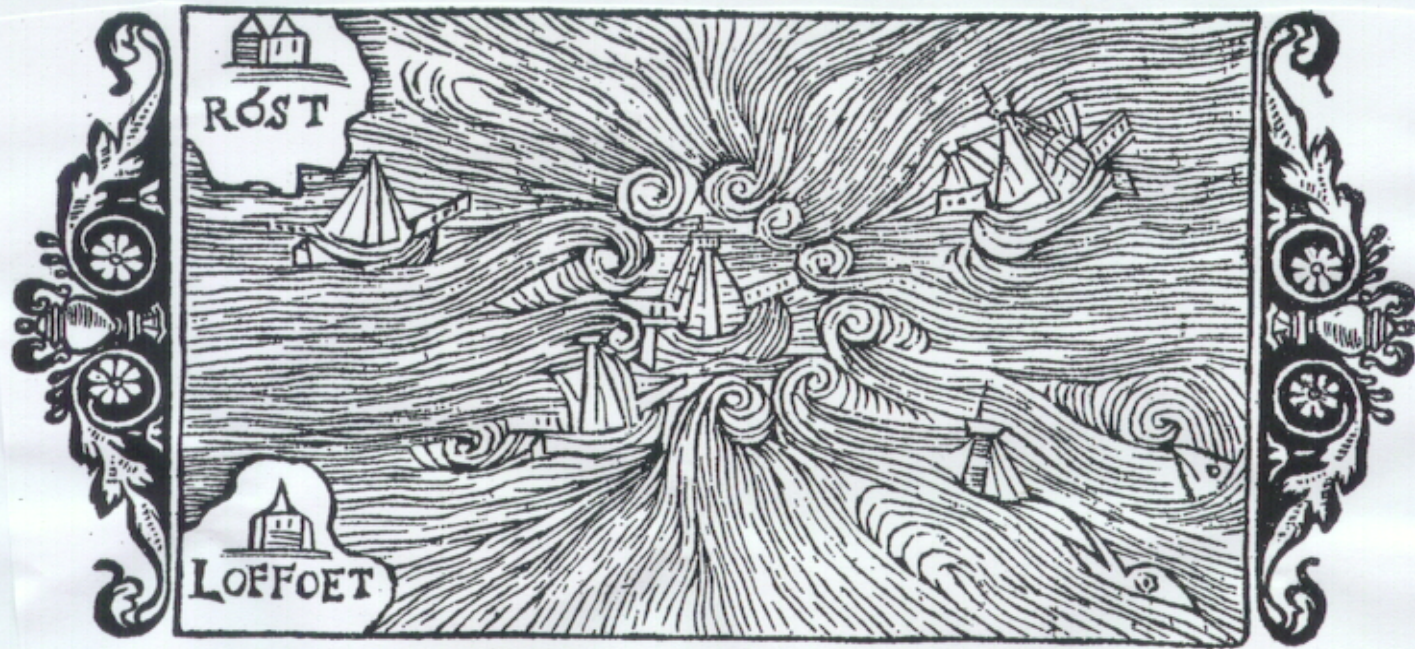
**It always has to do with MAPS!
This one is based on reports from daring adventurers long before Christ**

Europa efter Mela's forestillinger.



Ældste kjendte verdenskart, fra Isidor-håndskr. fra slutten av 7. årh. St. Gallen [K. MILLER].

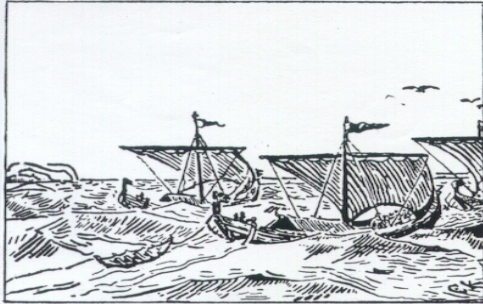
**Oldest known
WORLD MAP
From around 700.**



Malstrømmen ved Lofoten [fra OLAUS MAGNUS].

**Even around the time of Christ,
adventurers had reported back
on the MALSTROEMS of the North.**

A Forecast Wave Incident in 864



**Gudrød, son of King Harald I,
campaigning against coastal
warlords in 864.
Advised about wave hazards by his
skald (shaman poet) Tjodolf:**

**”Do not leave before it evens
The flat fairway of longships.
Giant waves are throwing boulders,
Gudrød, up on the sandy shore.
Wait, you famous king,
Wait for gentle weather.
Stay, and wait for tailwind.
Waves are breaking
And foaming by Jæren.”**

**Gudrød neglected
Tjodolf’s forecast,
outside Jæren the ship sank,
and they all perished.**

**1100 years later, this
area was branded as #14
out of 22 coastal
areas especially exposed
to dangerous waves.**



The Brussels 1853 Conference

- **Letter to the Swedish/Norwegian Charge d’Affairs in Washington, signed M.F. Maury, dated 24 december 1851:**
 - **”The object is to enlist in this great work, the public and private meteorological observations.....**
 - **The Norwegian participant in 1853 was Lt. Nils Ihlen**
- **His report to the government emphasized the potential importance to science and the implicit global dimension of this initiative**
 - **Lt. Ihlen, later admiral, in 1864 assumed position as director of Det norske Veritas, a wellknown ship Classification Society.**

Classic Norwegian Cyclone Model

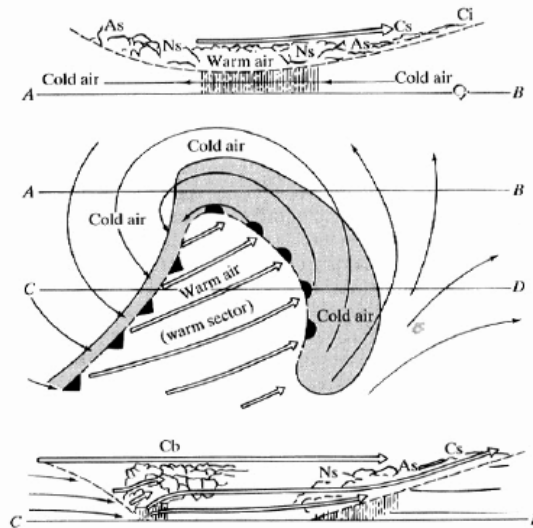
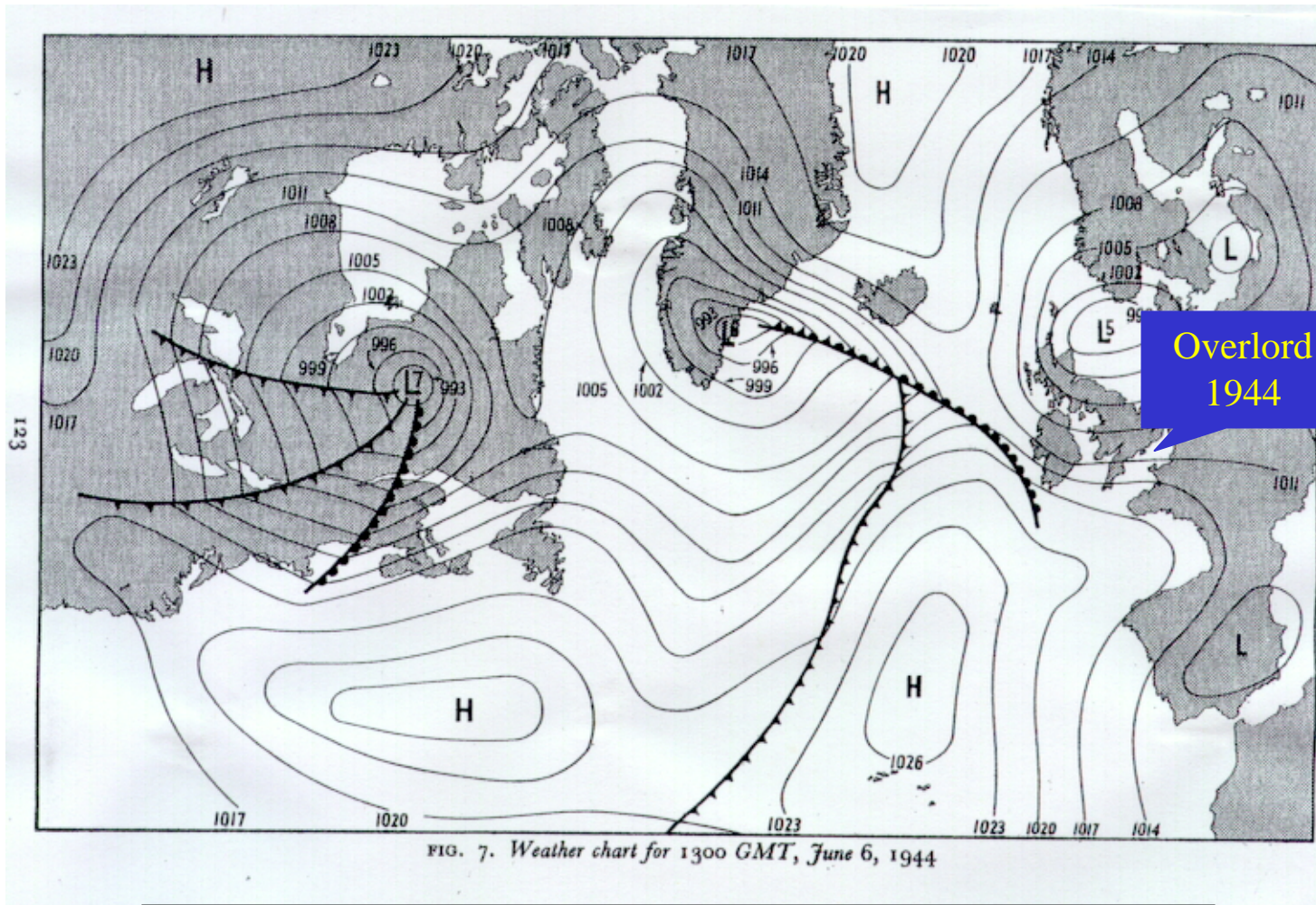


Figure 5.8 The wave cyclone model (after J. Bjerknes and H. Solberg). Center drawing, horizontal plane view; top, vertical cross-sectional view just north of wave apex (line *AB*); bottom vertical cross-sectional view across warm sector (line *CD*). (For abbreviations of cloud-type names, see section 2.1; arrows depict air flow.)

The legacy of the Bergen School of Meteorology



To some extent, marine forecasting survived the hardships of WW2.

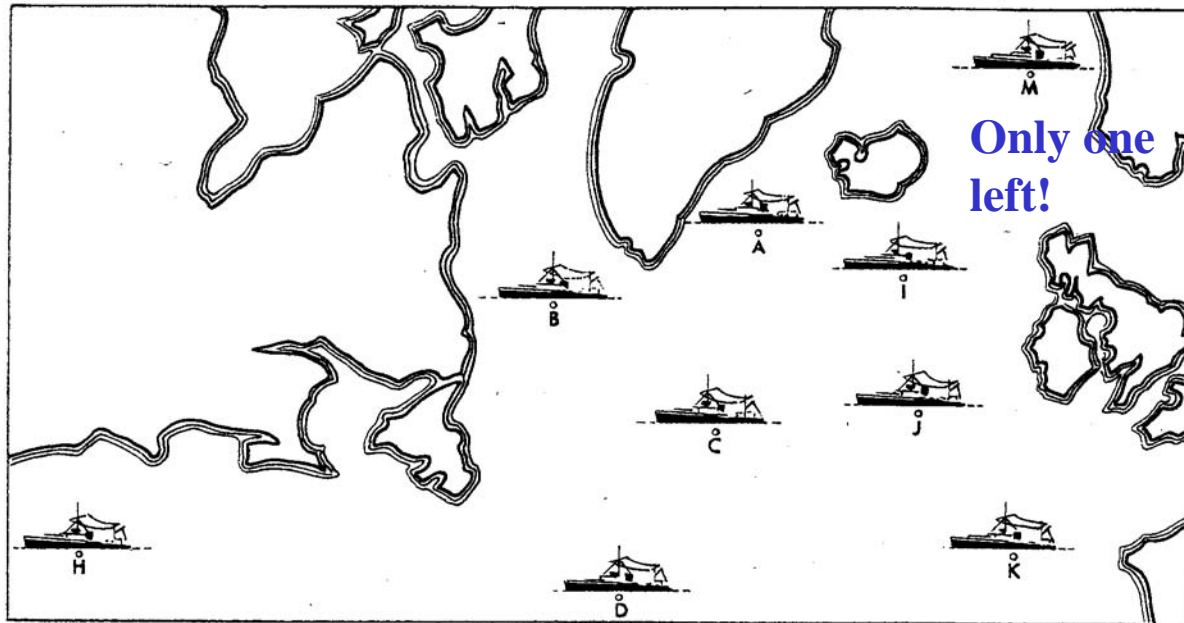


Fig. 1. Værskipene i Atlanterhavet. Deres hovedoppgave er å ta meteorologiske observasjoner, men de spiller også en viktig rolle i redningstjenesten i Atlanterhavet.

The weatherships were the 'backbone' of postwar marine forecasting, and implicitly in support to the upcoming numerical modeling.

The Offshore Adventure in the North Sea:

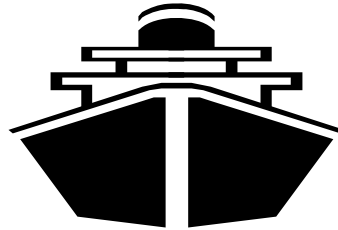
- **Started from the late 70's a new development within marine forecasting**
- **Required oceanographic information in addition to meteorology**
- **Spurred a revolution in oceanographic numerical modeling and monitoring**
- **A specialized Marine Forecasting Center with modern QA was established in 1996.**

Today we emphasize the onboard/onsite delivery of tailored information products based on our contemporary model&monitoring systems.

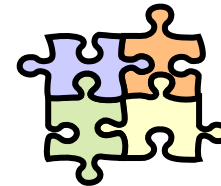
Anywhere!



Anytime!



Integrated!



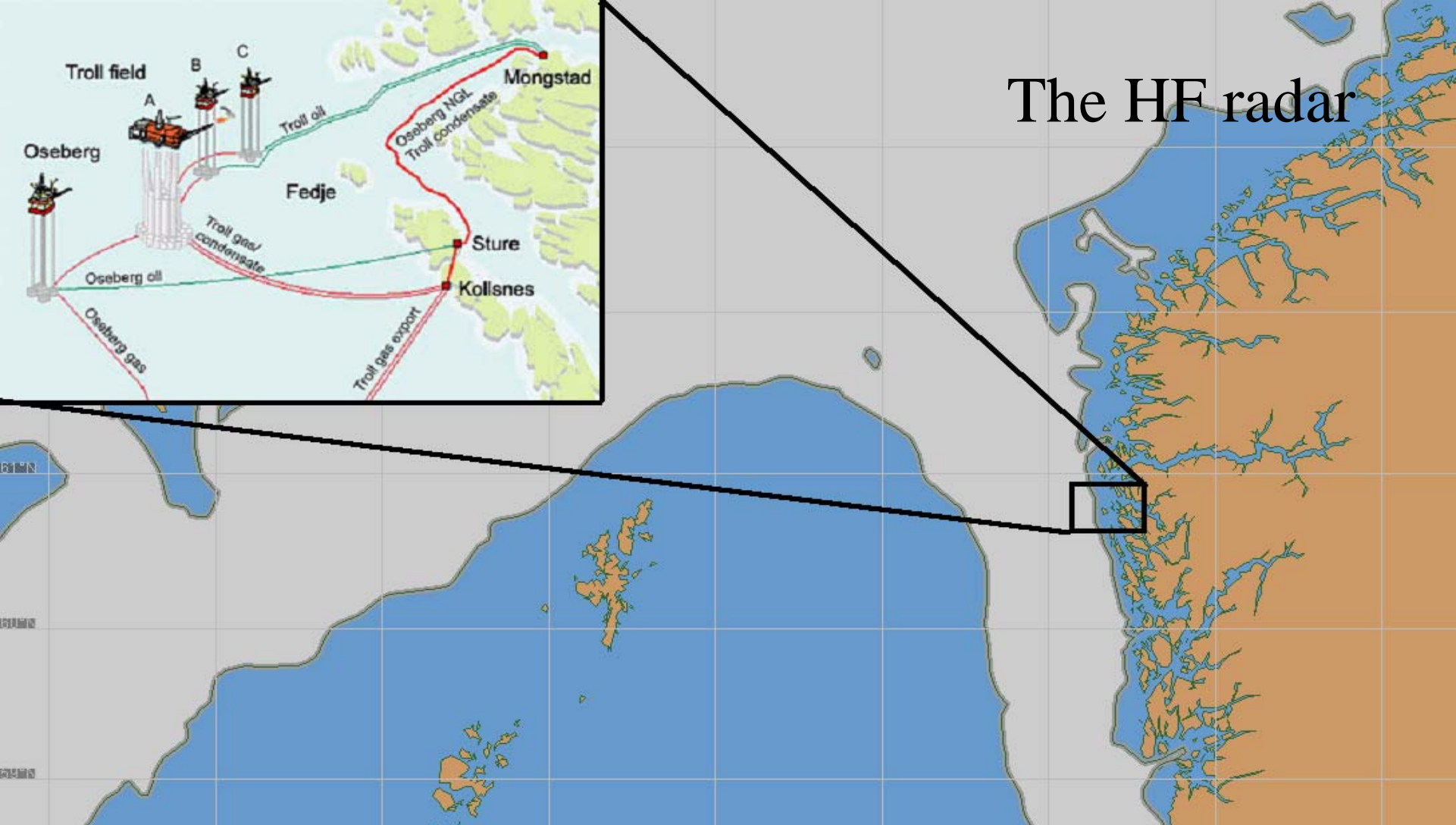
- **For marine operations Safety and Regularity (incl. planning)**
- **For Contingency Services**
- **For Coastal Protection**

- *Integrated in the end user's own technical infrastructure*

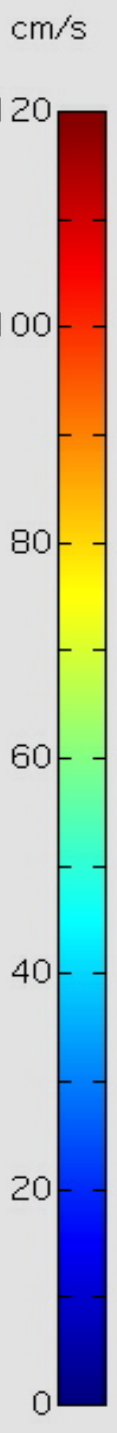
Up to date examples

- Our marine forecasting services are based on contemporary numerical models , an optimized customer interface, and modern monitoring technology qualified for
- **SUSTAINED OPERATION**

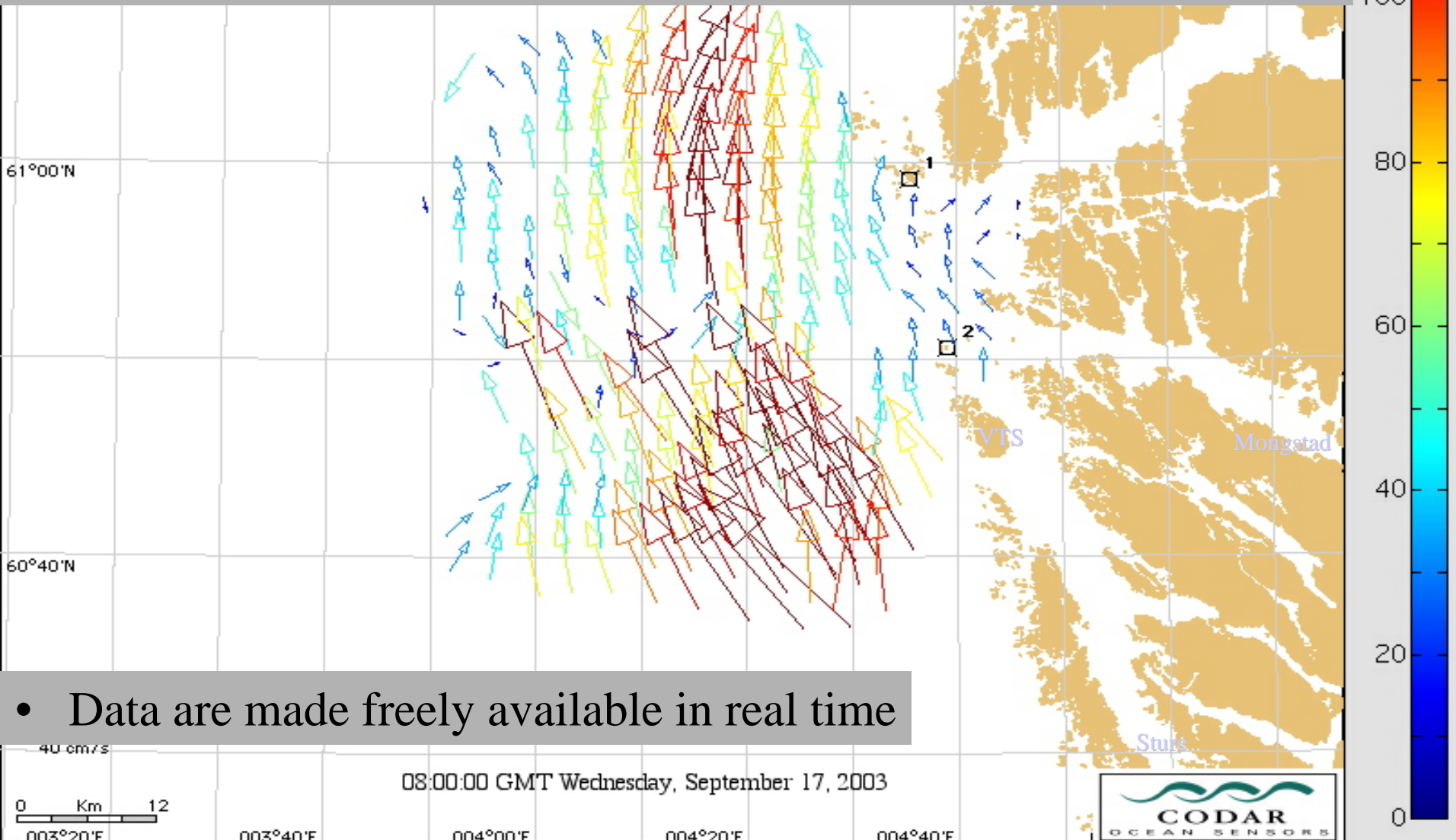
The HF radar



- Objective: To monitor the surface currents and sea state in the fairways to the petroleum terminals Sture and Mongstad
- Motivation: The variable Norwegian Coastal Current is a safety issue for ship traffic in the region

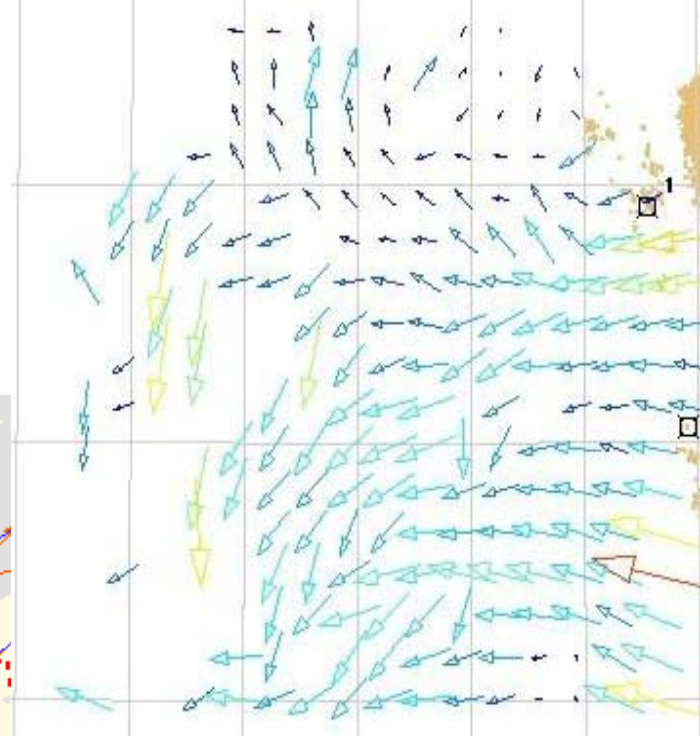
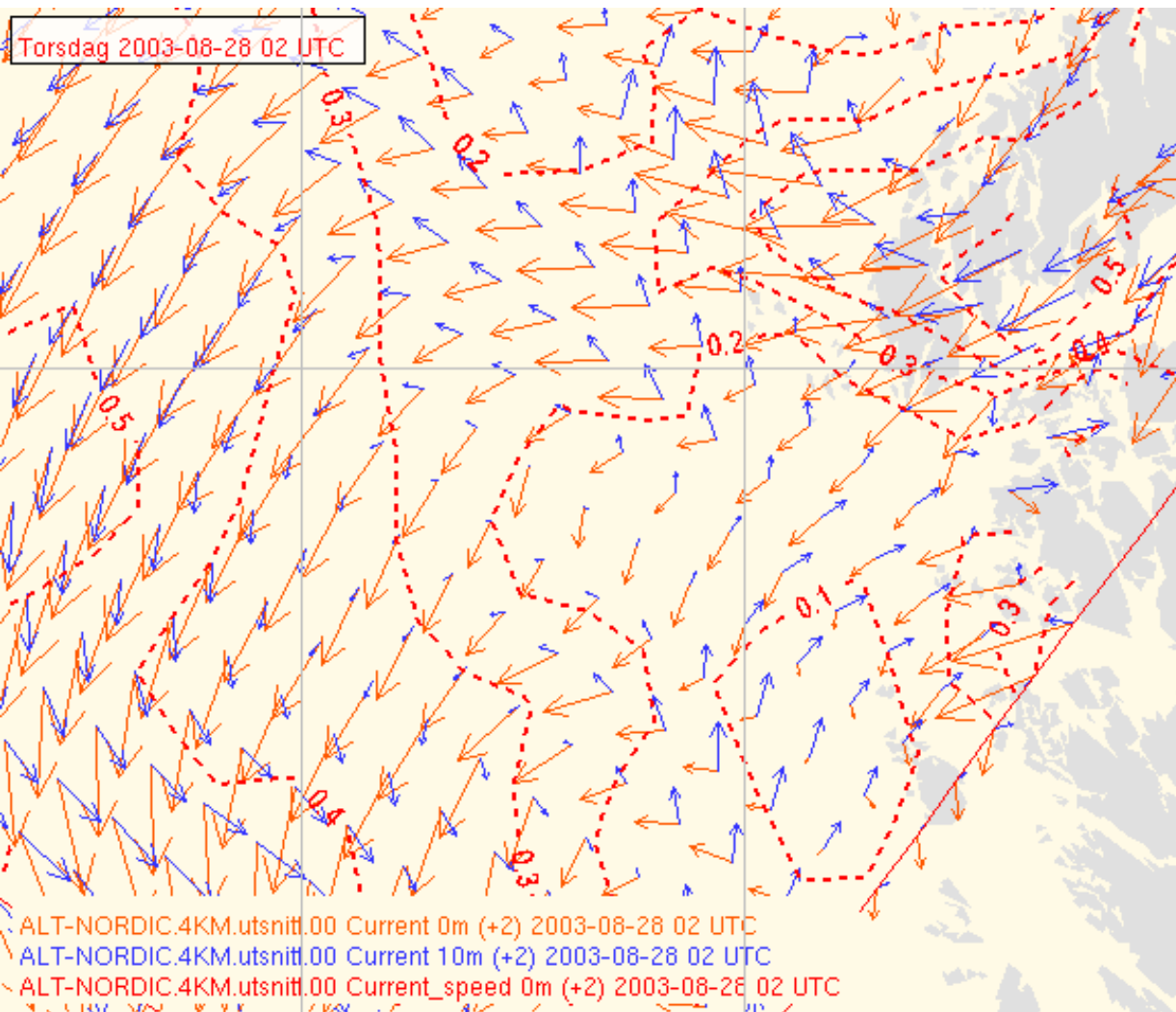


- Surface current maps and significant wave height are reported hourly to hf.met.no since 2003AUG18



- Data are made freely available in real time

Codar v ocean model



4 km ocean model:

→ Surface

→ 10 m depth

Happy Birthyear!

- THE OCEAN:
 - We travel it and live from it!
 - We observe it and predict it!
 - We protect it!